

# UCSF

## UC San Francisco Previously Published Works

### Title

Publisher Correction: Bridging the gap between measurements and modelling: a cardiovascular functional avatar.

### Permalink

<https://escholarship.org/uc/item/4tr7w36f>

### Journal

Scientific reports, 10(1)

### ISSN

2045-2322

### Authors

Casas, Belén  
Lantz, Jonas  
Viola, Federica  
et al.

### Publication Date

2020

### DOI

10.1038/s41598-020-58809-7

Peer reviewed

OPEN

# Publisher Correction: Bridging the gap between measurements and modelling: a cardiovascular functional avatar

Belén Casas, Jonas Lantz, Federica Viola, Gunnar Cedersund, Ann F. Bolger, Carl-Johan Carlhäll, Matts Karlsson  & Tino Ebbers 

Correction to: *Scientific Reports* <https://doi.org/10.1038/s41598-017-06339-0>, published online 24 July 2017

In the original version of the Article, the following paragraph was omitted from the beginning of the Introduction:

“Currently, cardiovascular diseases are mainly assessed based on clinical markers at specific locations in the cardiovascular system. However, as a result of hemodynamic coupling, diseases are normally not limited to a single location but instead affect several sites in the heart and the vasculature. For example, in patients with aortic stenosis, the chronically elevated left ventricular afterload causes adverse cardiac remodelling over time. The detailed examination of single clinical biomarkers obscures the system-wide analysis demanded by the complex relationships in the cardiovascular system. Therefore, despite advances in imaging techniques and diagnostic parameters for characterizing hemodynamics, determining the overall multifaceted cardiovascular status of a specific patient remains a challenging task.”

This Article also contained an error in the Methods section under subheading ‘MRI examinations and data processing’,

“Imaging parameters included: velocity encoding (VENC) 140 cm/s, flip angle 5°, echo time 3.0 ms, repetition time 5.2 ms, parallel imaging (SENSE) speed up factors of 3 (AP direction) and 1.6 (RL direction), k-space segmentation factor 3 and elliptical k-space acquisition.”

now reads:

“Imaging parameters included: velocity encoding (VENC) 140 cm/s, flip angle 5°, echo time 3.0 ms, repetition time 5.2 ms, parallel imaging (SENSE) speed up factors of 3 (AP direction) and 1.6 (RL direction), k-space segmentation factor 2 and elliptical k-space acquisition.”

This Article also contained an error in Equation 8,

$$J(p) = \sum_{i=1}^5 \sum_{t=1}^N \left( \frac{Q_i(t) - \tilde{Q}_i(t, p)}{\sigma_i(t)^2} \right)^2$$

now reads:

$$J(p) = \sum_{i=1}^5 \sum_{t=1}^N \left( \frac{Q_i(t) - \tilde{Q}_i(t, p)}{\sigma_i(t)} \right)^2$$

These errors have now been corrected in the PDF and HTML versions of the Article.

Published online: 29 January 2020



**Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2020